What is claimed is:

1. A circuit board, comprising:

a signal conductor; and

a conductive plane having an opening, wherein dimensions of the opening and proximity of the opening to the signal conductor are selected to affect an impedance of the signal conductor.

2. The circuit board of claim 1, wherein signal conductor has a width, and the opening has a width greater than the signal conductor width.

3. The circuit board of claim 1, wherein the signal conductor is centered with respect to the opening.

4. The circuit board of claim 1, wherein a portion of the opening is located beneath the signal conductor.

5. The circuit board of claim 1, wherein no portion of the opening is located beneath the signal conductor.

6. The circuit board of claim 1, wherein the signal conductor and the conductive plane form at least a portion of a signal-transmission path.

7. The circuit board of claim 6, wherein the transmission path presents substantially uniform impedance to a high-frequency signal.

8. The circuit board of claim 7, wherein the impedance of the transmission path is a function of the opening width.

9. The circuit board of claim 7, wherein the signal conductor has a width, and the impedance of the transmission path is a function of the signal conductor width.

10. The circuit board of claim 1, wherein the opening is substantially parallel to the signal conductor.

11. The circuit board of claim 1, wherein the opening is continuous.

12. The circuit board of claim 1, further including a bridging conductor that electrically couples the conductive plane across the opening.

13. The circuit board of claim 12, wherein the bridging conductor has a width dimensioned to provide a current pathway across the opening that presents a negligible impedance discontinuity to a signal flowing generally parallel to the opening.

14. The circuit board of claim 1, further including an insulating layer between the signal conductor and the conductive plane.

15. The circuit board of claim 1, wherein the signal conductor comprises a trace.

16. The circuit board of claim 1, wherein the signal conductor is inside a circuit board.

17. A circuit board, comprising:

a signal conductor;

a conductive plane having a first opening and a second opening, wherein respective dimensions of the openings and respective proximity of the openings to the signal conductor are selected to affect an impedance of the signal conductor.

18. The circuit board of claim 17, wherein no portion of the first opening is located beneath the signal conductor.

19. The circuit board of claim 17, wherein a portion of the conductive plane between the first opening and the second opening defines a return-signal conductor, and wherein the signal conductor and the return-signal conductor form at least a portion of a transmission path.

20. The circuit board of claim 19, wherein a longitudinal centerline of the return-signal conductor coincides with a longitudinal centerline of the signal conductor.

21. The circuit board of claim 19, wherein the transmission path presents substantially uniform impedance to a high-frequency signal.

22. The circuit board of claim 19, wherein the impedance of the transmission path is a function of the first opening width.

23. The circuit board of claim 19, wherein the impedance of the transmission path is a function of the return-signal conductor width.

24. The circuit board of claim 17, further including a bridging conductor that electrically couples the conductive plane across the first and second openings.

25. A method of manufacturing a multi-layered printed circuit board that handles a high-frequency signal, comprising the steps of:

forming a signal-conducting trace on a first insulating layer;

forming a second insulating layer adjacent to the first insulating layer;

forming a conductive plane on the second insulating layer; and

forming an opening in the conductive plane, wherein dimensions of the opening and proximity of the opening to the signal conductor are selected to affect an impedance of the signal conductor.

26. A method of manufacturing a multi-layered printed circuit board that handles a high-frequency signal, comprising the steps of:

forming a signal-conducting trace on a first insulating layer;

forming a second insulating layer adjacent to the first insulating layer;

forming a conductive plane on the second insulating layer; and

forming in the conductive plane a spaced apart first opening and a second opening, wherein respective dimensions of the openings and respective proximity of the openings to the signal conductor are selected to affect an impedance of the signal conductor.

27. The method of claim 26, wherein the first opening and the second opening cooperatively define a conductive plane relative to the trace.

28. A method of conducting a high-frequency signal in a circuit board, comprising the steps of:

transmitting the high-frequency signal along a signal conductor of the circuit board; and

returning the high-frequency signal along a portion of a conductive plane having an opening, wherein dimensions of the opening and proximity of the opening to the signal conductor are selected to affect an impedance of the signal conductor.

29. The method of claim 28, wherein the opening, the signal conductor, and a distance between the opening and signal conductor being dimensioned to define a signal-transmission-path impedance.

30. An electronic system, comprising:

a circuit board that includes a signal conductor and a conductive plane having a continuous opening aligned with the signal conductor, the signal conductor and a portion of the conductive plane proximate to the opening defining at least a portion of a signal-transmission path.

31. A circuit board, comprising:

a signal conductor having a conductor width; and

a conductive reference plane having a continuous opening aligned with the signal conductor, the opening having an opening width.